

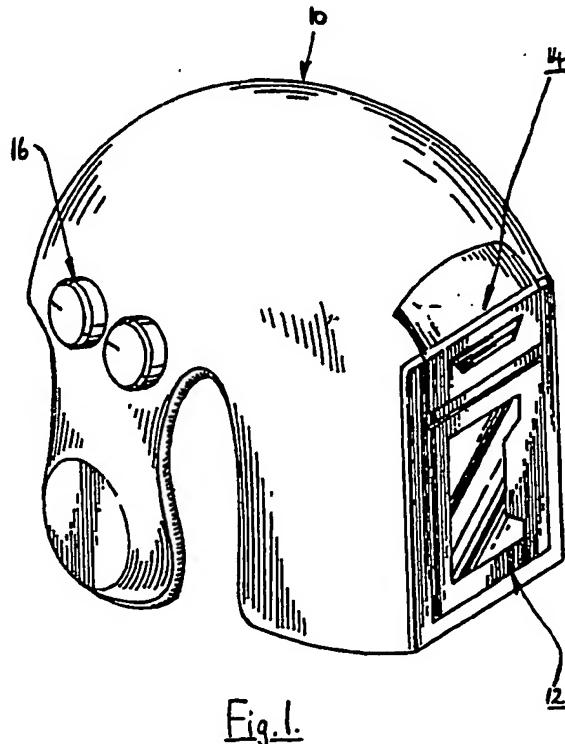
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## (54) Headgear having audio facility

(57) An article of headgear, for use by swimmers comprises a helmet 10 or headband (Figs. 2 and 3) with at least one recess, sealed against water, for a stereo cassette player 12 or the like, and with earpieces containing loudspeakers. There are no external wires. External control knobs 16 or switches are provided on the helmet or headband.

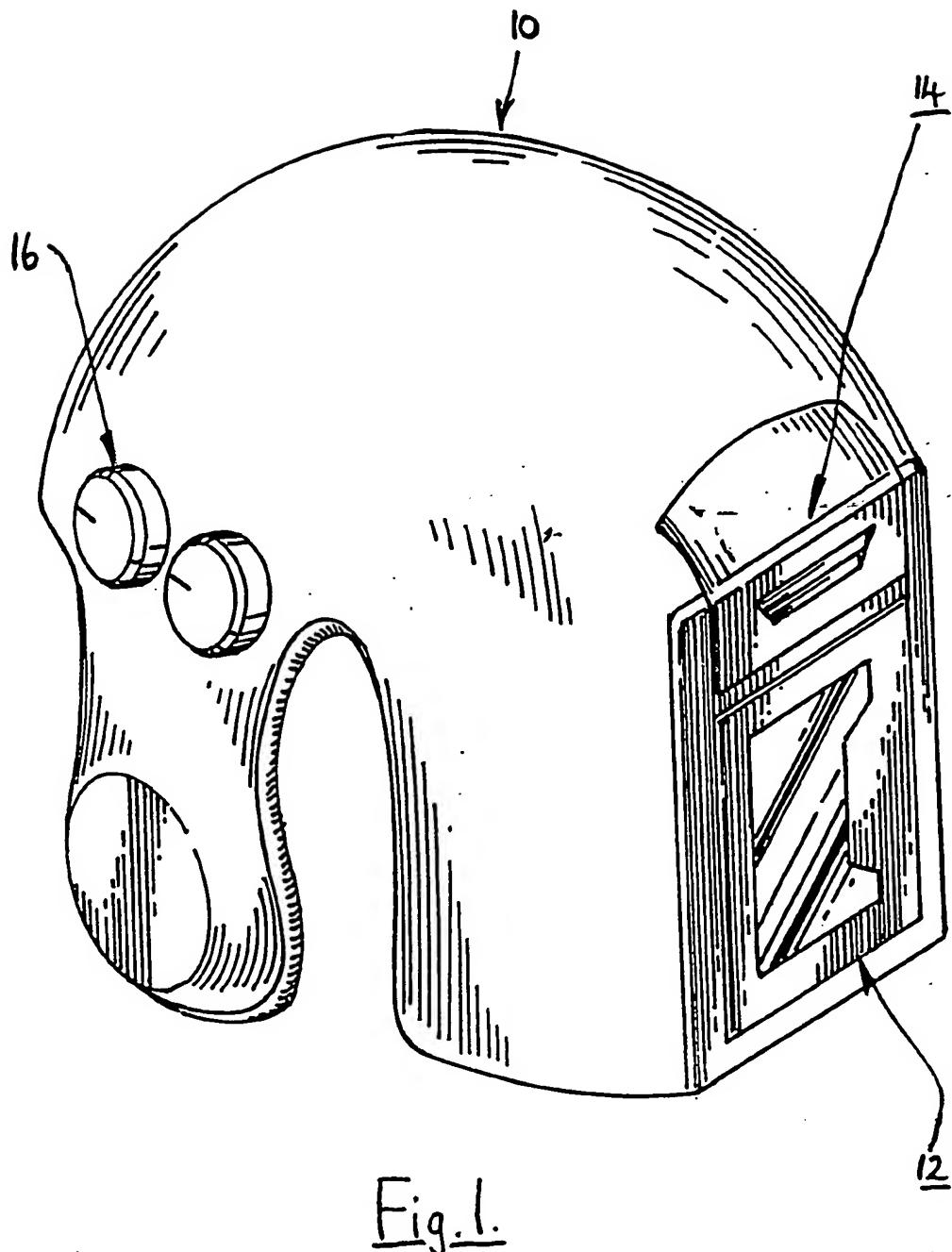


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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995  
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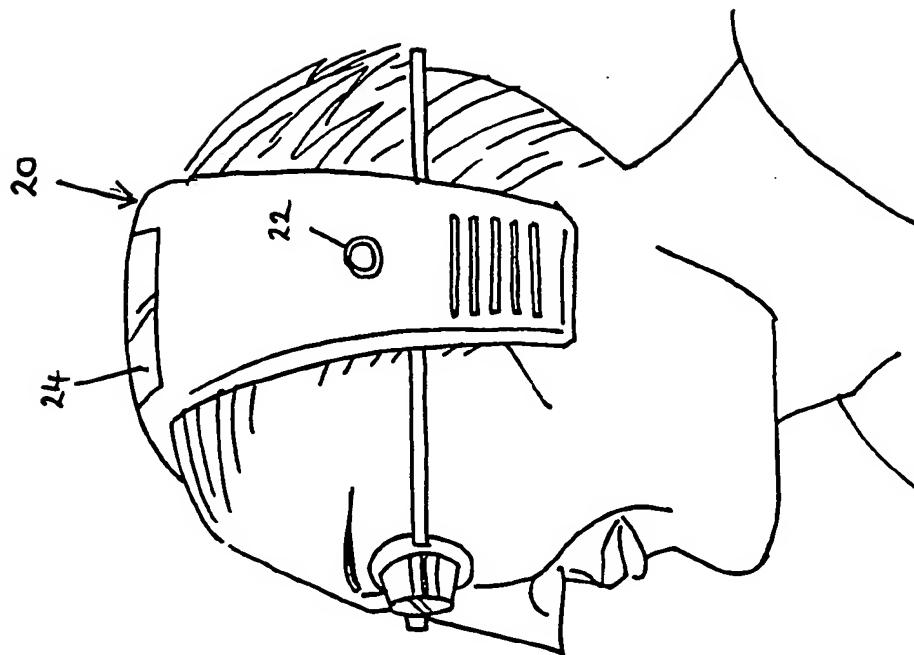


Fig. 3.

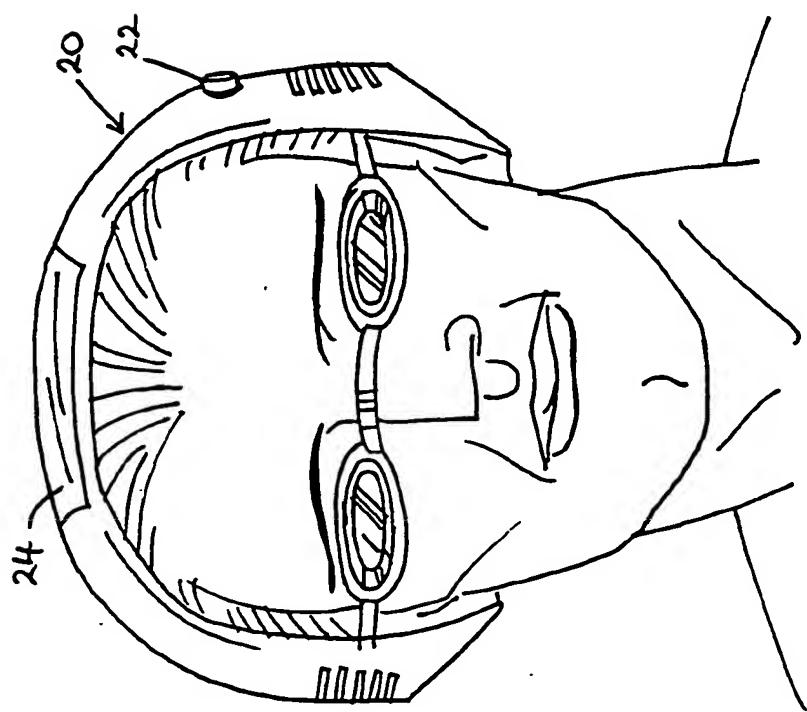


Fig. 2.

HEADGEAR HAVING AUDIO FACILITYSPECIFICATION

5           This invention relates to headgear which has an audio facility, and is particularly concerned with headgear appropriate to be worn while swimming and which can provide music and/or speech for the enjoyment and/or instruction of the wearer.

10          Many forms of headgear are known which provide an audio facility for the wearer. One such item of headgear is described in US-A-4,077,007. This describes a helmet, for use by a motorcyclist, which has an antenna mounted within the helmet, a set of earphones within the helmet, a battery and an AM/FM radio receiver with controls on the outside of the helmet.

15          It is an object of the present invention to provide headgear suitable for use by swimmers so that they are able to enjoy music and/or speech while in the water. It is therefore necessary that the headgear should be fully waterproof.

20          Swimming is considered to be an excellent form of exercise. However, swimming for extended distances can be extremely boring for some people and the present invention provides a means to enhance this leisure activity.

25          It is a further object of the present invention to provide waterproof headgear for swimmers which provides an audio facility without any external, trailing wires. The components are all sealed in watertight compartments for protection.

30          The present invention may be embodied either in a helmet or in a headband. The latter can generally be made lighter and less obtrusive.

In order that the invention may be fully understood two presently preferred embodiments of headgear in accordance with the invention will now be described by way of example and with reference to the accompanying drawings. In the drawings:

Fig. 1 is a perspective view of a waterproof stereo cassette swimming helmet in accordance with the invention;

Fig. 2 is a front view of a waterproof headband incorporating a cassette player; and,

Fig. 3 is a side view of the headband of Fig. 2.

Referring first to Fig. 1 there is shown a helmet indicated generally at 10, which may be made as an injection moulded plastics item. The helmet may have a chin strap (not shown). The helmet is intended to fit fairly snugly on the head. At the rear of the helmet there is provided a recess in which a stereo cassette player 12 is housed. Suitable seals are provided around the periphery of the cassette player to prevent the ingress of water. Above the stereo cassette player there is provided a battery door 14 which screens a recess within which batteries are housed. The batteries and the cassette player are thus both housed within waterproof compartments.

The helmet 10 is also provided with loudspeakers at each side, housed within foam-padded side portions of the helmet. The loudspeakers are also rendered waterproof, for example by being covered with a rubber membrane. Above one of the loudspeakers, on the outside of the helmet, are provided control knobs 16. These may comprise a volume/on/off control knob and a rewind/fast forward control knob. They are mounted on the outside of the helmet for ease of access.

It will be noted that there are no external wires from the helmet. All the electrical connections are made within the body of the helmet. Seals are provided where necessary to prevent the ingress of  
5 water.

Figs. 2 and 3 show an alternative embodiment of headgear, which here is in the form of a headband 20. This consists of an arcuate moulded plastics body which has built-in headphones at each side adjacent to  
10 the ears. One control knob is indicated at 22. In this embodiment the cassette deck is housed at the top of the headband, as indicated at 24. Again, suitable sealing means, incorporating O-ring seals for example, are provided around the cassette deck to seal it  
15 against water. The headband version of the article is light in weight and is aesthetically pleasing. It may be secured in place by a chin strap (not shown).

The headgear of the present invention can be used not only with standard audio cassettes but also  
20 with microcassettes. The product can also be made as a compact disc player instead of a tape player. Although in most cases the user would wish to listen to music, the product can also be used to play speech tapes, for example for training purposes for swimmers.

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CLAIMS:

1. An article of headgear for use by swimmers, comprising a housing arranged to be fitted on the head, at least one recess in the housing to receive audio transmitting means whose output is directed to the ears of the wearer, sealing means to render the or each said recess waterproof, and external control means on the housing for actuation by the wearer to control the audio transmitting means.

2. An article of headgear as claimed in claim 1, in which the housing is formed as a helmet with earpieces containing loudspeakers and with a recess adapted to receive a stereo cassette player.

3. An article of headgear as claimed in claim 2, in which the recess for the stereo cassette player is at the back of the helmet, and a second, adjacent recess is provided for a battery or batteries.

4. An article of headgear as claimed in claim 1, in which the housing is formed as an arcuate headband with the audio transmitting means located at the top of the headband and with loudspeakers in portions arranged to cover the ears.

5. An article of headgear as claimed in any preceding claim, in which all electrical connections are within the housing, sealed where necessary against water.

6. An article of headgear for swimmers, substantially as hereinbefore described with reference to the accompanying drawings.

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**Patents Act 1977**  
**Examiner's report to the Comptroller under Section 17**  
**(The Search report)**

Application number  
**GB 9413016.8**

<b>Relevant Technical Fields</b>		<b>Search Examiner</b> <b>MR D BUCKLEY</b>
(i) UK Cl (Ed.N)	A3V	
(ii) Int Cl (Ed.6)	A42B 1/12, 3/30; A63B 33/00	<b>Date of completion of Search</b> <b>19 SEPTEMBER 1995</b>
<b>Databases (see below)</b>		<b>Documents considered relevant</b> following a search in respect of Claims :-
(i) UK Patent Office collections of GB, EP, WO and US patent specifications.		1 TO 6
(ii) ONLINE: WPI		

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<b>X:</b>	Document indicating lack of novelty or of inventive step.	<b>P:</b>	Document published on or after the declared priority date but before the filing date of the present application.
<b>Y:</b>	Document indicating lack of inventive step if combined with one or more other documents of the same category.	<b>E:</b>	Patent document published on or after, but with priority date earlier than, the filing date of the present application.
<b>A:</b>	Document indicating technological background and/or state of the art.	<b>&amp;:</b>	Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 2252231 A	(WATKINS) see especially page 3	1 & 5 at least
X, Y	GB 2185364 A	(LEATHER) see especially lines 16 to 39 of page 3 and Figures 7 to 10	X: 1 & 5 at least Y: 4
X	US 5022100	(BELANGER) see especially line 33 of column 3 to line 35 of column 4	1 & 5 at least
X, Y	US 4321433	(KING) whole document	X: 1, 2, 3, 5 & 6 Y: 4
X	DE 2825921	(BOTH) whole document	
X	DE 2817195	(BOTH)	

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